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CLASSIFICATION OF THE MEMBRACIDAE OF AMERICA

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LIVERMORE FALLS, MAINE

		Key to Subfamilies
	(10). (5).	Third apical cell of corium elongate, sessile, base truncate. Scutellum more or less visible; exceptionally when covered by sides of pronotum the apical cells of corium are arranged obliquely on apical margin which is then destitute of a limbus; tibiæ rarely dilated.
3	(5).	Pronotum destitute of a posterior process, more or less sexangulate
		or quadrangulate; base of head frequently elevated in a transverse carina; clavus gradually acuminate from base to apex (one
4	(2)	exception)
±	(0).	or unarmed
5	(2).	Scutellum completely covered by sides of pronotum, or abortive.
		Posterior tarsi much shorter than the front and middle tarsi
		Subf. HOPLOPHORIONINÆ.
7	(6).	Posterior tarsi equal in length to or longer than front and middle
0	(0)	tarsi.
0	(9).	One or more pairs of tibiæ dilated and flattened; apical margins of head foliaceousSubf. MEMBRACINÆ.
9	(8).	Tibiæ simple, not dilated; margins of head not foliaceous
		Subf. DARNINÆ.
LO	(1).	Third apical cell of corium stylate, triangular or transversely ellip-
		tical, its base never sessile and truncated.
11((12).	Tegmina membranous, bases and costal area sometimes coriaceous
		and opaque, venation distinct, limbus not broad.
		Subf. SMILIINÆ

Subfamily &THALIONINÆ

Key to Genera

- 1(26). Clavus gradually acuminate from base to apex.
 2 (5). Base of head not elevated in a transverse carina and destitute of horns and tubereless occili near eyes and base; pronotum and
- horns and tubercles, ocelli near eyes and base; pronotum and scutcellum with a median carina, unarmed; margins of tegmina parallel, tips not passing apex of abdomen; wings with 4 apical cells; scutcellum triangular.

- 5 (2). Base of head elevated in a transverse carina frequently sulcate at middle and tuberculate each side, or bicorniculate.
- 6 (9). Wings with 2 apical cells; pronotum and scutellum unarmed.
- 7 (8). Venation of corium irregular forming numerous cellules, tegmina opaque or semiopaque; pronotum slightly broader than long, depressed, with a median carina; scutellum triangular, destitute of a median carina or tip lightly carinate, apex acuminate; ocelli distant from each other and base of head.......ÆTHALION Latr.
- 9 (6). Wings with 4 apical cells.
- 10(19). Pronotum convex, unarmed.
- 12(11). Corium with 4 or 5 apical cells.

14(13). Corium with 5 apical cells.

- 15(16). Base of head armed each side with a long slender horizontal horn; scutellum with an erect slender compressed horn its altitude three times its width; tegmina with 1 discoidal cell.............MINA Walk.
- 16(15). Base of head arcuate, unarmed; scutellum cornute, or crested, or carinate; tegmina hyaline, corium with 2 discoidal cells.
- 17(18). Scutellum with a median carina or small crest longer than high; pronotum with a median carina; head perpendicular, ocelli very distant; tarsi medium.......................LOPHYRASPIS Stal.
- 19(10). Dorsum of pronotum elevated in an erect or porrect horn or process, or cornute above each humeral.
- 20(23). Pronotum destitute of a horn above each humeral.
- 22(21). Dorsum of pronotum and of scutellum each elevated in a nearly erect acuminate compressed horn equal in altitude; corium with 1 discoidal cell; base of head bicorniculate, horns erect, acute _______LAMPROPTERA Germ.
- 23(20). Pronotum cornute above each humeral.
- 24(25). Scutellum oblong, longitudinally sulcate or impressed, apex obtuse; suprahumerals small acute, compressed; vertex of head perpendicular, flat, ocelli equidistant; tegmina hyaline, corium with 7 apical cells and 1 discoidal cell......TOLANIA Stal.

WILLIAMSIANA Godg.

Subfamily CENTROTINÆ

Key to Tribes and Genera

1(38). Clavus gradually acuminate from base to apex.

Tribe Acuminatini

- 2(15). Venation of tegmina irregular, reticulate forming numerous cellules; posterior pronotal process close to scutellum.
- 3(10). Pronotum convex, unarmed above humerals.

- 4 (5). Dorsum of pronotum seen from side straight, posterior process broad at base almost covering scutellum, gradually acuminate; tibiæ slightly dilated ETONEUS Kirk. 5 (4). Dorsum of pronotum seen from side strongly sinuate. 6 (9). Pronotum gibbous anteriorly between humerals, dorsum bisinuate, posterior process shorter than abdomen; apex scutellum emarginate or truncate; ocelli near eyes; tibiæ simple. 7 (8). Summit of gibbosity convex, humerals produced in tubercles, posterior process narrow, sides parallel, apex acute between apical 8 (7). Summit of pronotal gibbosity truncate, humerals not produced, sides in front of humerals with a tubercle in a depression each side, posterior process broad at base, constricted at middle then acuminate to lightly elevated apex..... TUBERCULOCENTRUS Godg. 9 (6). Pronotum depressed, convex anteriorly, posterior process narrow at base, sides parallel, apex reaching middle of abdomen acute and unituberculate; ocelli nearly equidistant..... ↑ TYLOCENTRUS V. D. 10 (3). Dorsum of pronotum cornute, or bilobed, or tuberculate. 11(14). Dorsum of pronotum bilobed or bicornute. 12(13). Dorsum of pronotum elevated between humerals its summit bilobed, posterior process broad at base almost covering scutellum, long as abdomen, gradually acuminate, seen from side bituberculate, basal margin of pronotum produced in a transverse carina; ocelli slightly nearer eyes, tibiæ slightly dilated..... MULTAREIS Godg. 13(12). Dorsum of pronotum convex, depressed, with a short acute horn above each humeral; otherwise as in "9(6)"..... 2 TYLOCENTRUS V. D. 14(11). Dorsum of pronotum quadricornute or distinctly quadrituberculate or quadrinodose, humerals strongly prominent, large, posterior
- process at least long as scutellum its apex crested; basal margin of head very sinuous, sides of clypeus parallel its apex extended below inferior margins of genæ; ocelli about equidistant, even . with center of eyes; tibiæ slightly dilated.....

EUWALKERIA Godg.

- 15 (2). Venation of tegmina normal.
- 16(37). Posterior pronotal process close to scutellum, apex acuminate; dorsum of scutellum depressed, unarmed.
- 17(34). Corium with 5 apical cells; wings with 4 apical cells.
- 18(27). Corium with 1 discoidal cell, apical cells placed obliquely on apical margin which is destitute of a limbus; tibiæ flattened and
- 19(22). Pronotum convex and gibbous anteriorly, not compressed.

20(21). Pronotum unarmed above humerals, posterior process slender apex reaching middle of abdomen; base of head bituberculate..... LIRANIA Stal. 21(20). Pronotum armed above each humeral with a short tricarinate horn, posterior process long, undulate, triquetrous, apex reaching tip of abdomen; base of head unarmed......FLEXOCENTRUS Godg. 22(19). Pronotum strongly elevated at least anteriorly, more or less compressed; some of apical cells of corium placed obliquely on apical margins which are destitute of a limbus. 23(24). Pronotum formed as a large reticulated inflated vesicle long as tegmina, completely covering body and scutellum; ocelli near 24(23). Dorsum of pronotum acute, or summit bilobed or slightly dilated. 25(26). Pronotum strongly elevated in front, lightly compressed, its summit bilobed or slightly dilated, sometimes emitting a process behind its tip_____LYCODERES Germ. 26(25). Dorsum of pronotum strongly elevated, compressed, acute, posterior process long as abdomen its base slightly emarginate almost covering scutellum STEGASPIS Germ. 27(18). Corium with 2 or 3 discoidal cells; legs simple. 28(29). Corium with 2 discoidal cells; pronotum moderately elevated and gibbous anteriorly, unarmed above humerals, posterior process shorter than abdomen, slender; apex scutellum acute; ocelli near eyesMELIZODERES Blanch. 29(28). Corium with 3 discoidal cells, tegmina opaque; apex scutellum emarginate; ocelli equidistant, far from base of head. 30(31). Radial vein of corium forked near middle, ulnar vein simple not forked; pronotum convex anteriorly, unarmed or with lateral crests, posterior process very slender and short..... MICROCENTRUS Stal. 31(30). Radial vein of corium simple not forked, ulnar vein forked near base; pronotum with a short truncate horn or elevated ruga above each humeral, posterior process long as abdomen..... CENTRUCHOIDES Fowl. 32(17). Corium with 4 apical cells two cells occupying apical margin obliquely, 1 true discoidal cell, radial vein forked far behind middle enclosing discoidal cell, ulnar vein simple; wings with 4 apical cells; pronotum elevated anteriorly in a high erect slender stilus, its summit emitting slender rami; ocelli distant; legs simple. 33(34). Basal margin of pronotum lightly reflexed, unarmed, front and lateral rami with inflated globules; base of head unarmed, apical margin lightly produced between eyes and front..... BOCYDIUM Latr.

- 34(33). Basal margin of pronotum reflexed, bidenticulate, rami of front process destitute of globules; base of head bituberculate, apical margin lobate each side front of eyes......STYLOCENTRUS Stal.
- 35(16). Posterior pronotal process distant from scutellum, long, compressed at middle, apex trispinose, dorsum with a large antlered horn above each humeral; scutellum long, base and apex elevated, apex touching swelling on posterior pronotal process; corium with 1 discoidal cell and 5 apical cells, radial vein forked far behind middle, ulnar vein simple; wings with 4 apical cells. SMERDALEA Fowl.
- 36 (1). Margins of clavus nearly parallel, clavus not or very slightly narrowed towards apex which is obtusely rounded; corium with 5 apical cells.

Tribe Hebesini

- 37(40). Basal margin of pronotum produced anteriorly in a prominent angle or long porrect process, cornute above each humeral, posterior process long, straight to middle then lightly curved, base almost completely covering scutellum, gradually narrowed behind, with an erect process at base; ocelli near eyes and base of head; corium with 3 discoidal cells, and some cellules; wings with 4 apical cells.
- 38(39). Basal margin of pronotum produced in a long porrect process sulcate above representing the union of the two sides NESSORHINUS A. & S.

- 39(38). Basal margin of pronotum produced in a prominent angle, desti-
- 40(37). Basal margin of pronotum straight or broadly sinuate, not produced anteriorly.
- 41(52). Posterior pronotal process distant from scutellum; corium with 2 discoidal cells, exterior vein of clavus not percurrent; wings with 4 apical cells.
- 42(43). Exterior discoidal cell of corium stylate, base angulate not truncate; pronotum cornute above each humeral, posterior process slender, long as abdomen, slightly ampliated at middle below where it touches scutellum BOOCERUS Stal.
- 43(42). Exterior discoidal cell sessile, base truncate.
- 44(47). Posterior pronotal process short, extended about to middle of abdomen.
- 45(46). Pronotum with a short horizontal horn above each humeral, apex posterior process dilated, spatulate......SPATHOCENTRUS Fowl.
- 46(45). Pronotum unarmed above humerals, posterior process very slender, apex acute......ISCHNOCENTRUS Stal.
- 47(44). Posterior pronotal process extended to apex of abdomen.

48(49).	Posterior pronotal process lobed inferiorly at middle which touches scutellum; pronotum cornute or tuberculate above each humeral. CAMPYLOCENTRUS Stal.
49(48).	Posterior pronotal process slender, sinuate, curving downwards and touching scutellum at middle; pronotum unarmed.
50(51).	Pronotum unicarinate; exterior discoidal cell of corium small nearly circular, interior discoidal cell much larger and subtriangular, exterior apical cell minuteOPHICENTRUS Fowl.
51(50).	Pronotum tricarinate, with a median carina and short carina each side above humerals; discoidal cells of corium subequal, exterior apical cell large PSILOCENTRUS Fowl.
52(41).	Posterior pronotal process close to scutellum.
53(60).	Corium with 2 discoidal cells; pronotum convex, unarmed.
54(57).	Wings with 4 apical cells; exterior discoidal cell of corium sessile, base truncate; posterior pronotal process short, slender.
55(56).	Posterior pronotal process long as scutellum, apex acute, humerals
	prominent, destitute of a furrow each side above humerals
	CENTRICULUS Fowl.
56(55).	Posterior pronotal process seen from side gradually dilated pos-
	teriorly, slightly longer than scutellum; pronotum with a deep
	furrow above each auriculate humeralAMBLYCENTRUS Fowl.
57(54).	Wings with 3 apical cells.
58(59).	Exterior discoidal cell of corium stylate; posterior pronotal process
00(00).	broad at base largely covering scutellum, extended beyond middle
	and sometimes beyond apex of abdomenGARGARA, A. & S.
50/59)	Exterior discoidal cell of corium sessile; posterior pronotal process
59(58).	short, slender, apex slightly passing middle of abdomen
	BRACHYBELUS Stal.
	Corium with 3 discoidal cells; wings with 4 apical cells.
61(64).	Exterior discoidal cell of corium sessile; pronotum cornute above each humeral, base of posterior process broad nearly covering scutellum.
62(63).	Exterior vein of clavus percurrent, corium destitute of transverse
` ′	venule between rami of ulnar vein; posterior pronotal process
	short, extended just behind middle of abdomen, gradually narrowed behind middlePLATYCENTRUS Stal.
63(62).	Exterior vein of clavus not percurrent, corium with 2 or 3 transverse venules in front of middle between rami of ulnar vein; posterior pronotal process long as abdomen
	ORTHOBELUS Stal.
64(61).	Exterior discoidal cell of corium stylate, base angulate; pronotum
	unarmed above humerals, posterior process broad at base covering most of scutellum.
65(66).	Posterior pronotal process extended just beyond middle of abdo-
	men; head with eyes narrower than width between humerals
	BRACHYCENTROTUS M. & B.

66(65). Posterior pronotal process long as abdomen; head with eyes broad as width between humerals.......MONOBELUS Stal.

Subfamily MEMBRACINÆ

Key to Tribes and Genera

1 (6). Pronotum more or less strongly compressed and elevated.

Tribe Membracini

- - Lateral carinæ of front process equally distant from its superior and inferior margins, both margins foliaceous; head longer than broad between eyes......Subg. Enchenopa A. S.
- 6 (1). Pronotum not compressed or foliaceous.
- 7(25). Apex of head rounded or obtusely angulate, not trilobed.
- 8(18). Pronotum destitute of front or suprahumeral processes, sometimes produced anteriorly in an obtuse angle.

Tribe BOLBONOTINI

9(12).	Form subglobular, very short, stout, rugose and carinate.
10(11).	Corium with 2 discoidal cells; wings with 4 apical cells
	BOLBONOTA A. S.
	Posterior pronotal process with a transverse tubercle compressed
	antero-posteriorly; dorsum gradually rounded to base of the
	tubercleSubg. Tubercunota Godg.
	Posterior pronotal process suddenly depressed in front of apex;
	dorsum straight or lightly sinuate in front of depression
	Subg. Bolbonota A. & S.
11(10).	Corium with 4 discoidal cells; wings with 5 apical cells
	BOLBONOTODES Fowl.
12 (9).	Form oblong, elongate or triangular.
13(17).	Corium with 3 discoidal cells; metopidium with one or more abbre-
	viated carinæ over each eye.
15(16).	Dorsum seen from the side nearly straight, two short carinæ over each eye
16(15).	Dorsum of pronotum seen from the side strongly bisinuate, one short carina over each eyeTYLOPELTA Fowl.
17(13).	Corium with 2 discoidal cells; dorsum of pronotum substraight, no
	short carinæ over eyesLEIOSCYTA Fowl.
18 (8).	Pronotum elongate, armed with horns or protuberances.
	Tribe PTERYGIINI
19(24).	Front of pronotum produced in a more or less porrect process or tubercle.
20(21).	Pronotum destitute of lateral carinæ, rugæ or tubercles, surface
	smoothGUAYAQUILA Godg.
21(20).	Pronotum furnished with carinæ and tubercles.
22(23).	Pronotal front process long, porrect, destitute of a tubercle at
	base, apex slightly dilated PHILYA Walk.
	Venation normal, corium with 3 discoidal cells
	Subg. Philya Walk.
	Venation irregular, with numerous cellules, toward apex
	Subg. Scalmophorus Fowl.
23(22).	Pronotal front process high, erect, carinate, or reduced to a tuber-
	cle; dorsum tuberculate and spinoseHYPSOPRORA Stal.
24(19).	Front of pronotum unarmed, dorsum with two robust erect or
	divaricate processes, one above each humeral, apices truncate,
	and one or more elevated tubercles between and behind them,
05 (5)	with numerous small spines PTERYGIA Lap.
25 (7).	Apex of head trilobed; pronotum with clavate or fungiform proc-
	esses on dorsum, variable in form
	SPHONGOPHORUS Fairm.

Subfamily HOPLOPHORIONINÆ

Key to Tribes and Genera

1 (6). Wings with 3 apical cells.

Tribe HOPLOPHORIONINI

2	(5).	Anal cell of wings distinct, sublobate, 1-veined; apex of posterior pronotal process not or slightly passing tip of abdomen.
9	(4)	Head broad, obtuse, equal in width to base of posterior pronotal
J	(±).	process, that process narrowed from base to apex
		PLATYCOTIS Stal.
		Metopidium strongly declivous, basal margin broadly sinuate between eyes.
		Pronotum convex and unarmed in front, or with a more or less
		porrect process on dorsum in front of humerals
		Subg. Platycotis Stal.
		Pronotum convex anteriorly, with a process on dorsum behind
		humeralsSubg. Lophopelta Stal.
		Metopidium slightly convex, not perpendicularly declivous, basal
		margin straight between eyes; pronotum with or without dor-
		sal elevations, with a median and two or three lateral carinæ
		above each humeral, lateral margins of posterior process sinu-
		ateSubg. Microschema Stal.
4	(3).	Head narrower than base of posterior pronotal process; pronotum
_	(0)	shield-shaped, lateral margins sinuate behind humerals, apex
		obtuse HOPLOPHORION Kirk.
		Pronotum destitute of front or dorsal process, lateral margins of
		posterior process parallel toward base
		Subg. Hoplophorion Kirk.
		Pronotum with a compressed, oblique porrect process, lateral
		margins of posterior process narrowed from base
5	(9)	Subg. Enchotype Stal.
J	(2).	
		of pronotum with an erect or reclined process, apex of posterior
c	(1)	process passing tip of abdomen
O	(I).	Wings with 4 apical cells.

Tribe POTNIINI

Subfamily DARNINÆ

Key to Tribes and Genera

1(46). Pronotum convex or gibbous, unarmed, humerals rarely auricularly produced; corium with 4 or 5 apical cells.

Tribe DARNINI

- 2(21). Pronotum covering a large part of tegmina; corium with 2 discoidal cells; head short, apex rounded or truncate, obtuse.
- 3(16). Pronotum convex, not gibbous, humerals not produced.
- 4(13). Pronotum destitute of a median longitudinal carina.
- 5(10). Corium emitting 2 longitudinal veins from base, contiguous or united toward origin.
- 6 (9). Sides of pronotum produced downward in a lobe behind each eye; occlli nearer each other than to eyes, distance variable.

- 10 (5). Corium emitting 3 longitudinal veins from base, radial vein forked near middle, the two ulnar veins contiguous or united toward

origin and simple, not forked, 2 elongate equal discoidal cells; pronotum lightly punctulate, basal margin not calloused, humerals distinct.

- 12(11). Ocelli distinctly nearer to eyes, lateral margins of pronotum yellow from behind humerals almost to apex; tegmina about one-half covered by sides of pronotum......OCHROLOMIA Stal.
- 13 (4). Pronotum furnished with a median longitudinal carina more or less distinct.

Subg. Tropidarnis Fowl.

Apex posterior pronotal process tridentate.....

Subg. Dectoneura Butl.

- 15(14). Corium emitting 2 longitudinal veins from base, radial vein forked at middle, ulnar vein forked just behind middle......
 - PARALOBIA Godg.
- 16 (3). Dorsum of posterior pronotal process gibbous, rugose, depressed, with a median carina, humerals produced in large auricular processes, lateral margins produced each side anteriorly in postocular lobe; longitudinal veins of corium (3) approaching costa, the two ulnar veins coalesce briefly to form an oval basal cell, interior basal cell occupying more than half the width of corium, 2 discoidal cells the interior cell large; clavus broadened towards apex.
- 18(17). Head produced downward, broad as long, not porrect; basal margin of pronotum not carinate, dorsum of posterior process rugose, tectiform at least towards apex, not nodose or sulcate.

- 21(22). Tegmina almost or entirely uncovered by pronotum, corium emitting 3 longitudinal veins from base, ulnar veins contiguous or united toward origin.
- 22(31). Corium with more than one discoidal cell.

	Corium with 3 discoidal cells, elongate, subequal. Pronotum strongly elevated, produced above humerals in a large
	inflated flattened lobe followed by a less elevated part with a broad shallow sulcus between, dorsum abruptly descending to
	the short obtuse apex which is much shorter than tegmina; size large
25(24).	Pronotum convex, not elevated, posterior process long, sides strongly and broadly impressed from margins, apex nearly long
	as tegmina; ocelli distinctly nearer eyes; size medium
26(23).	Corium with 2 discoidal cells, interior cell much larger than interior cell.
27(28).	Pronotum convex anteriorly, compresso-elevated behind humerals, superior margin of compressed part longitudinally canaliculate
28(27).	Pronotum entirely convex, tectiform towards posterior apex, superior margin not canaliculate.
29(30).	Posterior pronotal process curved obliquely upward and backward and compressed from middle, gradually elevated above abdomen; ocelli near eyes; size very small
30(29).	
31(22).	Corium with 1 discoidal cell situate far behind middle, ulnar vein forked in front of middle, radial vein forked far behind middle.
32(45).	Corium destitute of a transverse venule between ulnar veins near middle, base of discoidal cell stylate.
33(34).	Dorsum of pronotum distinctly tricarinate, punctured, tectiform posteriorly, apex acute
34(33).	Dorsum of pronotum unicarinate.
35(38).	Sides of posterior pronotal process slightly narrowed from base, not slender, apex rounded, obtuse; body short and broad.
36(37).	Discoidal cell of corium situate between rami of radial vein; pronotum distinctly but not closely punctulateTRISTRAN Kirk.
37(36).	Discoidal cell of corium situate between rami of first ulnar vein; pronotum very lightly punctulateRHEXIA Stal.
38(35).	Posterior pronotal process elongate, slender, gradually acuminate, apex acute.
39(42).	Discoidal cell of corium situate between rami of first ulnar vein.
40(41).	Tegmina almost hyaline, apical veins suboblique; pronotum densely and distinctly punctured, not shining; head triangular, ocelling the state of the
41(40).	nearer each other than to eyes
	BRACHYTALIS Met. & Brun.
42(39).	Discoidal cell of corium situate between rami of radial vein.

43(44). Pronotum smooth, shining, dorsum arcuate; veins of corium straight, sometimes one or two extra discoidal cells; ocelli slightly nearer each other DARNOIDES Fairm. 44(43). Pronotum dull, not shining, dorsum more or less sinuate; veins of corium curved; ocelli slightly nearer eyes..... DYSYNCRITUS Fowl. 45(32). Corium furnished with a transverse venule near middle between the two ulnar veins, base of discoidal cell on transverse venule, sessile, truncate; pronotum punctulate, hardly shining, dorsum broadly sinuate the apex elevated; ocelli slightly nearer eyes...... PROCYRTA Stal. 46 (1). Pronotum armed with horns or spines. 47(50). Pronotum produced anteriorly in a porrect horn or prominent angle, posterior process very rarely lightly carinate on sides; tegmina entirely uncovered, corium with 2 elongate subequal discoidal cells.

Tribe ACONOPHORINI

- 50(47). Pronotum armed each side above humerals with one or two horns or spines.
- 51(70). Pronotum destitute of lateral spines near posterior apex, not produced posteriorly in a long spine, apex acute not inflated or nodose.

Tribe HEMIPTYCHINI

- 52(55). Tegmina partly covered by sides of pronotum, corium with 2 discoidal cells.
- 54(53). Head triangular, obtusely angulate, ocelli equidistant; suprahumerals directed outward, short in 3, longer in 2, posterior process entirely tectiform; body pilose......EUALTHE Stal.
- 55(52). Tegmina entirely uncovered by sides of pronotum, very rarely the apex of clavus is covered.

- 57(56). Corium with 2 discoidal cells, usually elongate and subequal.
- 58(61). Pronotum moderately elevated, convexly declivous in front, not or slightly impressed above humerals as seen from the front and sides parallel, suprahumerals moderate in size, not robust, tips acute (one exception), posterior process gradually acuminate subequal to tip of abdomen; ulnar vein forked near base; head subtriangular.
- 59(60). Pronotum finely punctulate, shining, suprahumerals short, slender, horizontal, not rising above dorsal line; corium with a transverse venule between rami of ulnar vein, base of exterior discoidal cell stylate; ocelli near each other.......TOMOGONIA Stal.
- 61(58). Pronotum strongly elevated anteriorly, produced far above humerals each side in a strong horn or angle, usually convex between.
- 62(69). Sides of posterior pronotal process not covering apex of clavus.
- 63(68). Ocelli almost equidistant; pronotum strongly declivous anteriorly, seen from front broadened upward.
- 64(67). Posterior pronotal process seen from above sinuate behind middle, slender behind sinus; sexes differ slightly in form.
- 65(66). Pronotum deeply impressed above humerals.....ALCMEONE Stal.
- 67(64). Posterior pronotal process seen from above gradually acuminate to apex, sides not sinuate, impressed above humerals; head and pronotum pilose...................................BUBALOPA Stal.
- 68(63). Ocelli distinctly, sometimes much nearer to each other than to eyes; suprahumerals directed outward and moderately upward, length variable, altitude of posterior process gradually decreasing to apex ______SANDARION Kirk.
- 70(51). Apex of pronotum armed each side with a spine and ending in a longer spine (sometimes deficient in 3); pronotum convex an-

teriorly, strongly inflated posteriorly, or posterior process furnished with inflated nodes; tegmina uncovered by pronotum, entirely free, corium destitute of a transverse venule between rami of ulnar vein near middle.

Tribe HETERONOTINI

- 71(76). Corium with 1 discoidal cell situate between rami of radial vein which is forked far behind middle, ulnar vein forked toward base; wings more than half as long as tegmina; pronotum strongly inflated especially posteriorly, posterior process not nodose; ocelli nearly equidistant.
- 72(73). Pronotum furnished with a carina each side extended from near eyes to behind middle of dorsum......HELIODORE Stal.
- 73(72). Pronotum destitute of lateral carinæ.

- 76(71). Corium with 2 discoidal cells, radial vein forked at or behind middle enclosing exterior discoidal cell, ulnar vein forked at or in front of middle enclosing interior discoidal cell which is double the length of exterior cell; tegmina double the length of wings; pronotum depressed, convex, suprahumerals when present are slender spines, posterior process with one or more inflated nodes constricted between, the distal node with a spine each side (often deficient in 3), ending in a longer spine at or below the tip (also sometimes deficient in 3); ocelli very near to each other.
- 77(78). Front tibiæ slightly dilated at middle; pronotum densely punctured, suprahumerals frequently present as slender spines, posterior process rugosely reticulate towards apex......HETERONOTUS, Lap.

Subfamily SMILIINÆ

Key to Tribes and Genera

- 1(82). Wings with three or four apical cells, second cell stylate.
- 2(51). Corium with two longitudinal veins emitted from base, contiguous or united sometimes appearing as one vein toward base; apex of pronotum gradually acuminate or ending in a spine.
- 3(44). Longitudinal veins of corium diverging from or near base, one or both veins forked in front of middle, one to four discoidal cells, four or five apical cells; pronotum destitute of longitudinal rugæ or smooth elevated lines.
- 4(27). Tegmina free, not covered by sides of pronotum.

Tribe CERASINI

- 12 (7). Pronotum not trispinose posteriorly.
- 13(18). Posterior pronotal process convex, not compressed, strongly swollen or globose at basal or apical part, apex a slender spine, a curved impression on sides.
- 14(17). Corium with three discoidal cells.
- 15(16). Base of posterior pronotal process swollen, apical part slender, dorsum of tumid part sinuate......ANTONÆ Stal.

- 18(13). Posterior pronotal process more or less compressed, dorsum frequently acute or carinate, apex gradually acuminate.
- 19(22). Pronotum very convex each side in front, a distinct callous each side near base, often impressed within basal margin; dorsum of posterior pronotal process frequently convex, rarely tectiform.

- 22(19). Pronotum obtuse in front, flat or slightly convex, not impressed within basal margin, a slightly impressed mark each side near base; dorsum of posterior process usually compresso-acute, sometimes convex, with large semicircular impression each side, apex frequently subulate.

- 24(23). Pronotum moderately elevated and convex anteriorly, unarmed or very slightly angulate above humerals, lengthily subulate posteriorly.
- 25(26). Lateral vertical margins of metopidium distinctly angulate, pronotum highest front of middle......STICTOCEPHALA Stal.
- 26(25). Lateral vertical margins of metopidium rounded, not angulate, pronotum highest at middle......STICTOLOBUS Metc.
- 27 (4). Tegmina partly covered by sides of pronotum, radial vein forked front of middle, two rarely three discoidal cells; posterior pronotal process gradually acuminate, not subulate.

Tribe AMASTRISINI

- 28(36). Corium with three discoidal cells, bases exterior and interior cells about equally distant from base, longitudinal veins briefly united near middle forming an intermediate oval basal cell, supernumerary transverse venules sometimes present forming extra cellules in that case the longitudinal veins slightly curved toward tips; third apical cell usually transverse, its base truncate but stylate.
- 29(43). Dorsum of pronotum destitute of tumid elevations.
- 31(30). Pronotum convex, depressed, dorsum seen from side nearly straight.
- 32(35). Third apical cell of corium irregularly triangular its base angulate; corium with supernumerary transverse venules forming extra cellules and veins slightly curved; fourth apical cell twice longer than broad; tegmina often with coriaceous patches where venation is indistinct.

- 35(32). Third apical cell of corium broadly transverse, elliptical, base truncate but stylate; venation normal, mostly hyaline, veins distinct; fourth apical cell of corium irregularly quadrangular; body often pubescent.......VANDUZEA Godg.
- 36(28). Corium with two discoidal cells, base of exterior cell extended some nearer toward base than interior cell; third apical cell small, transverse, base angulate and lengthily stylate, second and fourth cells elongate, fifth and apex interior basal cell broad; venation normal.
- 37(40). Pronotum convex, not compresso-elevated.

- 40(37). Pronotum highly compresso-elevated, dorsal carina acute; radial vein forked far in front of middle, all apical cells elongate excepting third which is small, base slightly angulate, fifth apical and interior basal cells broad.

- 43(29). Dorsum of posterior pronotal process with two large rounded elevations each side of median carina; third apical cell of corium triangular, base angulate......LALLEMANDIA Funkh.
- 44 (3). Longitudinal veins of corium parallel, close to each other and to costa, not diverging from base, large part of tegmina covered by pronotum; interior basal cell very broad; normally one discoidal cell; wings with four apical cells; posterior pronotal process with elevated longitudinal lines.

Tribe POLYGLYPTINI

- 45(48). Pronotum destitute of a porrect horn anteriorly (one exception).

- 48(45). Pronotum produced anteriorly in a long porrect horn.
- 49(50). Corium with three apical cells......BILIMEKIA Fowl.
- 50(49). Corium with five apical cells POLYGLYPTA Burm.
- 51 (2). Corium with three longitudinal veins emitted from base, all or two contiguous or united at base; tegmina partly covered by sides of pronotum.

Tribe SMILIINI

52(65). Sides of pronotum destitute of longitudinal carinæ or elevated lines, pronotum punctured; longitudinal veins of corium diverging from near base.

- 53(58). Corium destitute of a transverse venule between ulnar veins front of middle, with one discoidal cell or none. 54(57). Pronotum compresso-elevated, dorsum acute. 55(56). Dorsum of pronotum seen from side highest in front; corium with 56(55). Dorsum of pronotum seen from side arcuate, highest at middle, corium destitute of discoidal cells......ADIPPE Stal. 57(54). Pronotum convex, not compressed, highest and sides strongly and broadly impressed behind humerals; dorsum posterior pronotal process lightly sinuate at base, suddenly strongly depressed in front of short apex; corium with one discoidal cell..... GODINGIA Fowl. 58(33). Corium with a transverse venule between ulnar veins in front of middle, two discoidal cells. 59(64). Dorsum more or less compresso-elevated. 60(63). Pronotum strongly elevated, humerals produced in oblique triangular lobes passing into front angles. 61(62). Radial vein of corium distant from costa, close to first ulnar vein leaving a broad costal cell, space between second ulnar vein and costa coriaceous and punctate excepting apical cells; dorsal elevation rounded in front, rather deeply impressed..... TELAMONANTHE Baker. 62(61). Radial vein of corium equally distant from first ulnar vein and costa; tegmina vitreous excepting toward base; dorsal elevation highest front of middle, straight posteriorly..... ANTIANTHE Fowl. 63(60). Pronotum moderately elevated and compressed; humerals obtuse, front angles not produced......CYTOLOBUS Godg. Pronotum strongly inflated posteriorly, constricted at middle..... Subgenus Xantholobus V. D. Pronotum not inflated, usually compressed at middle. Dorsum low, sinuate at middle; form elongate, much depressed Subgenus Evashmeadia Godg. Dorsum not distinctly sinuate above. Dorsum highest anteriorly, altitude gradually decreasing straight to apex......Subgenus Atymna Stal. Dorsum regularly arcuate above, highest near middle.....
- 66(71). Corium with two discoidal cells; wings with four apical cells.
- 67(70). Corium with four apical cells; pronotum normally produced anteriorly in a porrect horn.

64(59). Pronotum convex, not compressed, with an obsolete median line;

Subgenus Cytolobus Godg.

68(69).	Radial vein of corium forked towards base, dorsum pronotum strongly compresso-elevated, acute, arcuate
69(68).	POLYRHYSSA Stal. Radial vein of corium forked far behind middle; pronotum depressed, dorsum sinuate, front rarely convex or angulate
70(67).	Corium with five apical cells, radial vein forked far behind middle; pronotum lightly arcuate, unarmedHERANICE Stal.
71(66).	Corium with one discoidal cell or none.
72(79).	Dorsum of pronotum elevated in a horn or process in front of or behind humerals; longitudinal veins of corium forked behind middle.
73(76).	Pronotal horn or process placed in front of humerals.
74(75).	Corium with three apical cells and one discoidal cell, longitudinal
	veins parallel approaching costa; dorsal horn porrect
75(74).	Corium with five apical cells, with or without a discoidal cell; front
	horn or angle erect or lightly inclined forward
76(73).	Pronotal horn or process placed behind humerals.
77(78).	Dorsum of pronotum with two large rounded elevations tandem, summits rounded, deeply sulcate betweenECUADORIA Godg.
78(77).	Dorsal elevation conical or convex, summit acute or obtuse with or without a posterior angle
79(72).	Dorsum of pronotum more or less compresso-elevated, destitute of a horn or angle, seen from side lightly sinuate and elevated be- hind humerals, summit very obtuse.
80(81).	Posterior pronotal process tectiform, sides flatMATURNA Stal.
	Posterior pronotal process subdepressed, sides convex
82 (1).	Wings with three or four apical cells, second cell sessile, base truncate; corium with one to three discoidal cells or none, and four or five apical cells.
	Tribe TELAMONINI
83(98).	Tegmina more or less covered by sides of pronotum.
84(91).	Wings with four apical cells.
85(88).	Dorsum of pronotum elevated in a horn or process, sides with
09(00).	longitudinal rugæ or elevated lines, humerals strongly produced, auriculate; head broad, ocelli distant from eyes.
86(87).	Pronotum produced anteriorly in a long oblique horn
87(86).	Pronotum elevated between or behind humerals in a horn or process directed upward, summit rounded, truncate or sinuate

	Dorsal pronotal process at least as long as high.
	Summit of dorsal process roundedSubgenus Telamona Fitch.
	Summit of dorsal process sinuateSubgenus Heliria Stal.
	Dorsal pronotal process long, narrow, tongue-shaped, summit
	roundedSubgenus Glossonotus Butl.
88(85).	Pronotum destitute of dorsal horn and of longitudinal rugæ.
	Pronotum strongly elevated, compressed, seen from side rounded
	and highest anteriorly, humerals not prominent
	ARCHASIA Stal.
90(89).	Pronotum convex, not compressed, lightly impressed each side be-
()	hind the not prominent humerals, median carina obsolete
	CARYNOTA Fitch.
91(84).	Wings with three apical cells; pronotum unarmed, convex.
92(95).	Dorsum of pronotum with more or less distinct longitudinal ele-
	vated lines; corium with one discoidal cell and five apical cells
	(transverse venule between first and second cells sometimes
	deficient).
93(94).	Discoidal cell of corium situate in fork of ulnar vein where longi-
	tudinal veins coalesce; elevated lines on dorsum rather indis-
	tinetINCOLEA Godg.
94(93).	Discoidal cell of corium situate in fork of radial vein, longitudinal
	veins not coalescing; elevated lines on dorsum distinct, strongly
	punctured between MENDICEA Godg.
95(92).	Dorsum of pronotum strongly punctate, destitute of longitudinal
	rugæ or lines.
96(97).	Corium with three discoidal cells (posterior cell rarely deficient);
	all apical cells wings sessile PHORMOPHORA Stal.
97(96).	Corium destitute of discoidal cells; first and second apical cells of
	wings sessile, third stylateAPHETEA Fowl.
98(83).	Tegmina free, not covered by sides of pronotum; posterior pro-
	notal process much shorter than tegmina, lateral margins usually
	longitudinally impressed.
99 (104	,
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	pronotum destitute of median carinaMICRUTALIS Fowl.

Subfamily TRAGOPINÆ

Key to Genera and Subgenera

- 2(1). Corium with 1 discoidal cell, apical cells arranged in a more or less circular or quadrangular form distant from the margins, limbus occupying about one-third of the surface; tegmina largely covered by sides pronotum; venation very indistinct, more evident towards tips; wings with 4 apical cells.....TRAGOPA Latr.
- 3(8). Base of head unarmed, destitute of horns or tubercles.
- 4(7). Sides of prostethium not produced in a lamina produced outward, furnished with a small lobe directed downward sometimes simulating a carina; lateral margins pronotum with a rather distinct elevated carina anteriorly from behind eyes to humerals.
- 5(6). Pronotum destitute of a median longitudinal carina or smooth line; head obtuse, apical margin obtusely rounded, not reflexed, front strongly reflexed; free part tegmina very lightly and remotely punctulate......Subg. Stilbophora Stal.
- 6(5). Pronotum furnished with a more or less distinct median longitudinal carina or smooth line, punctate; head not narrowed towards apex; free part tegmina punctate.....Subg. Tropidolomia Stal.
- 7(4). Sides of prostethium produced in a large lamina behind eyes produced outward, lobate behind; pronotum distinctly or lightly punctate, lateral margins destitute of a carina anteriorly, front strongly inflexed, narrowed from base......Subg. Tragopa Latr.
- 8(3). Base of head furnished with two horns or tubercles, strongly produced in front of pronotum; head subelliptical; pronotum strongly produced horizontally forward from humerals, basal margin rounded over the head between eyes, lateral margins anteriorly with a flattened carina from eyes to below humerals; posterior process gradually acuminate, apex acute; dorsum bi-impressed each side.....

Subg. Ceratopola Stal.

ATRYTONOPSIS VIERECKI SKINNER FROM TEXAS

A single male specimen of this species has been received by the writer, from Mr. O. C. Poling, who captured it at the Sunny Glen Ranch, Brewster County, Texas, in April, 1926. The locality is in the vicinity of Alpine, Texas, and the capture of this specimen at that point extends the recorded range of the species, all previous records known to the writer having been from New Mexico. The specimen has been compared with a co-type in the collection of the National Museum in Washington.—E. L. Bell.